

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**



Consommation
et Corporations Canada

Consumer and
Corporate Affairs Canada (21) (A1)

2,055,230

Bureau des brevets

Patent Office

(22)

1991/11/08

Ottawa, Canada
K1A 0C9

(43)

1993/05/09

5,005,2/07

(51) INTL. CL. ⁵ B60B-007/00

(19) (CA) **APPLICATION FOR CANADIAN PATENT** (12)

(54) ~~Wheel Component~~

(72) Le Heiget, Georges U., Jr. - Canada ;

(73) Same as inventor

(57) 16 Claims

Notice: The specification contained herein as filed

Canada

CCY 325a (10-89) 41

2055230

- 8 -

WHEEL ORNAMENTING DISC

ABSTRACT OF THE DISCLOSURE

A method and a device for ornamenting automobile wheels includes a disc of translucent colored, synthetic plastic material that is installed behind the wheel to be exposed through openings in the wheel between the hub and the rim. The device hides the structure behind the wheel, provides an ornamental appearance and, where disc brakes are installed, ~~prevents the disc from being seen~~.

WHEEL ORNAMMENTING DISC

The present invention relates to a method and a device for ornamenting automobile wheels of the type having openings through the wheel rim supports.

In many vehicle wheels, particularly those of personal vehicles such as cars and smaller trucks, the vehicle wheels are styled with openings through the rim supports. By "rim support" is meant that part of the wheel that extends from the hub to the wheel rim, which in turn serves to engage a pneumatic tire or the like. These openings beneficially reduce the mass of the wheel and may be considered to have an ornamental aspect.

In many cases, the structure of the vehicle behind the wheel, for example a brake drum, is visible through the rim support openings. This has led some vehicle owners to paint this visible structure to improve the appearance of their vehicles. This painting technique is not entirely satisfactory, as the paint wears off and must be renewed from time to time. Furthermore, the paint does not give a truly finished appearance to the structure inside the wheel.

The present invention is concerned with a 


According to one aspect of the present invention there is provided a device for ornamenting a vehicle wheel having a rim, an annular rim support means for mounting the rim on a hub, the rim support means having a central hub aperture and an array of openings through the rim support means, said device comprising a sheet having a central hub opening, a peripheral size sufficiently large to cover the array of openings in the rim support means, with the central hub opening in registry of the hub aperture in the rim support means, and an ornamental surface on at least one side thereof.

The sheet is preferably in the form of a synthetic plastic disc colour coordinated with the vehicle. It is installed on the wheel hub behind the wheel to provide a colorful appearance through the wheel openings and to cover the unattractive structure behind the wheel. The disc is preferably translucent so that it will stand out when illuminated from behind on a sunny day.

It is believed that the sheet will act as a least a partial dust shield where disc brakes are installed on the vehicle.

The devices may be provided in various sizes and with different patterns of stud holes to match the vehicle on which they are to mounted. It is also possible to provide the devices with stud hole knock-outs so that hole patterns can be provided matching a wide range of vehicles using a single set of the ornamental sheets.

According to another aspect of the present invention there is provided a method of ornamenting a vehicle wheel of the type having a rim, a rim support means for mounting the rim on a hub and having a central aperture and an array of openings through the rim support means around the aperture, the said method comprising covering the openings in the rim support means with ornamental cover means located on an inner side of the rim support means such that the ornamental cover means is visible from an outer side of the wheel only through the openings in the wheel support means.

In the accompanying drawings, which illustrate an exemplary embodiment of the present invention:

Figure 1 is a side view of a wheel of the type in question;

Figure 2 is a side view of an ornamental device according to the present invention; and

Figure 3 is an exploded view showing the mounting of the device on a

vehicle in association with the wheel.

Referring to the accompanying drawings, especially to Figures 1 and 3, there is illustrated a wheel 10 having a rim 12 surrounding an annular rim support 14. The rim support has a central hub aperture 16 and a series of stud holes 18 around the hub aperture. In addition, an array of openings 20 is formed in the rim support between the hub aperture 16 and the rim 12. When the wheel 10 is mounted on the vehicle, the openings 20 expose the structure behind the wheel to view. This may include such structure as a brake drum 22 that is generally unattractive in appearance.

As illustrated most particularly in Figures 2 and 3, ~~the device 24~~ 24 for use with the wheel 10 is in the form of a sheet 26 of corrosion resistant synthetic plastic material with a circular outer periphery 28 and a concentric central hub opening 30. Distributed around the central hub opening 30 are knock-outs 32 that are small areas of the sheet bounded by frangible lines 34 so that the area within each frangible line can be broken out of the sheet to provide a stud opening 36. The distribution of the knockouts is such that a pattern of stud openings can be formed in the sheet to match a wide variety of vehicle wheels.

Referring to Figure 3, the brake drum 22, ~~the device 24~~ 24 and the wheel 10 are shown in an exploded view to illustrate the installation of the ornamental device 24. The brake drum has a series of studs 38 that project from an outer face of the brake drum. The sheet 26 has an appropriate set of knock-outs 32 removed to provide suitable stud openings 36 for engaging the studs 38. The wheel then fits over the ornamental device onto the stud 38, and the wheel nuts 40 are installed.

The ornamental device of the present invention is a simple, inexpensive solution to the problem at hand. It provides a highly ornamental and unique appearance to


2055230

- 4 -

the wheels of a vehicle. It is applicable to any vehicle wheel having openings in the rim support, including spoked wheels.

While one particular embodiment of the present invention has been described in the foregoing, it is to be understood that other embodiments are possible within the scope of the present invention. The invention is to be considered limited solely by the scope of the appended claims.

CLAIMS

1. A device for ornamenting a vehicle wheel having a rim, an annular rim support means for mounting the rim on a hub, the rim support means having a central hub aperture and an array of openings through the rim support means, said device comprising a sheet having a central hub opening, a peripheral size sufficiently large to cover the array of openings in the rim support means, with the central hub opening in registry of the hub aperture in the rim support means, and an ornamental surface on at least one side thereof.
2. A device according to Claim 1 wherein the sheet is circular with a diameter less than the diameter of the rim.
3. A device according to Claim 2 for a wheel having a plurality of stud openings in the rim support means around the hub aperture, the device comprising a plurality of stud holes positioned around the central hub opening so as to align with the stud openings in the rim support means.
4. A device according to Claim 1 comprising a plurality of stud knock-outs in the sheet arranged around the central hub opening, each stud knock-out comprising a frangible line around a selected area of the sheet.
5. A device according to any one of Claims 1 to 4 wherein the sheet comprises

6. A device according to any one of Claims 1 to 4 wherein the sheet comprises a synthetic plastic material.
7. A device according to any one of Claims 1 to 4 wherein the sheet comprises a coloured synthetic plastic material.
8. A device according to any one of claims 1 to 4 wherein the sheet is translucent.

9. A vehicle wheel having a rim, rim support means for mounting the rim on a hub, the rim support means having a central hub aperture and an array of openings through the rim support means around the central hub aperture, and a wheel ornamenting device comprising a sheet located on an inner side of the rim support means and extending over the array of openings through the rim support means, the sheet having a central hub opening aligned with the central hub aperture of the rim support means and an ornamental outer surface, confronting the inner surface of the rim support means.

10. A wheel according to Claim 8 wherein the sheet is circular with a diameter less than the diameter of the rim.

11. A wheel according to Claim 8 including a plurality of the stud openings in the rim support means, around the hub aperture and a plurality of stud holes in the sheet arranged around the central hub opening therein in alignment with the stud openings in the hub.

12. A wheel according to any one of Claims 8, 9, and 10 wherein the sheet comprises ~~synthetic plastic material~~.

13. A wheel according to any one of Claims 8, 9, and 10 wherein the sheet comprises ~~a synthetic plastic material~~.

14. A wheel according to any one of Claims 8, 9, and 10 wherein the sheet comprises a coloured synthetic plastic material.

15. A wheel according to any one of Claims 9, 10, and 11 wherein the sheet is translucent.

16. A method ~~of ornamenting a vehicle wheel~~ of the type having a rim, a rim support means for mounting the rim on a hub and having a central aperture and an array of openings through the rim support means around the aperture, the said method comprising

2055230

- 7 -

covering the openings in the rim support means with [REDACTED] means located on an inner side of the rim support means such that the ornamental cover means is visible from an outer side of the wheel only through the openings in the wheel support means.

2055230

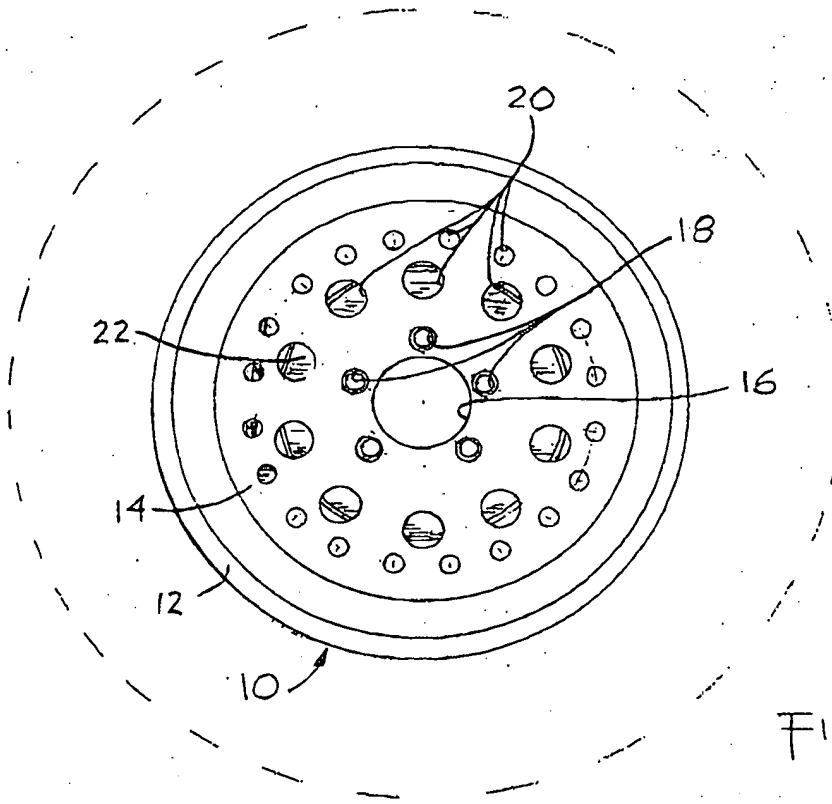


FIG. 1

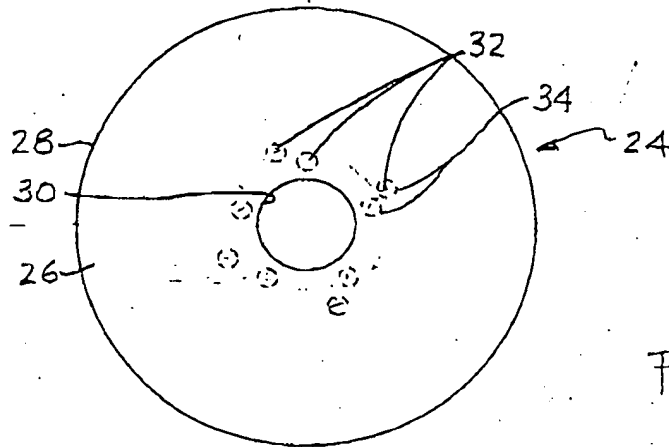


FIG. 2

2055230

